

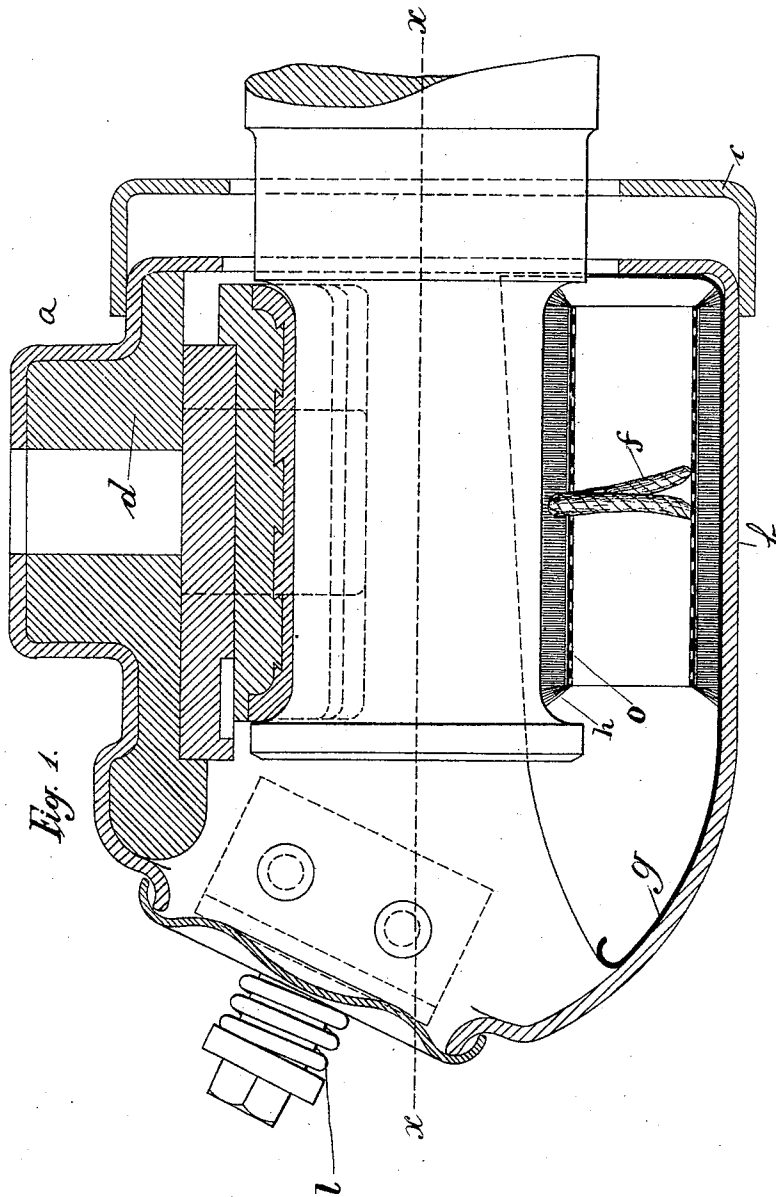
(No Model.)

3 Sheets—Sheet 1.

H. SICHELSCMIDT.
AXLE BOX WITH REMOVABLE OIL WELL.

No. 538,553.

Patented Apr. 30, 1895.



Witnesses:
J. W. Rea.

Debbie Sundry.

Inventor:
Hermann Sichel Schmidt

By James L. Norris.
Atty.

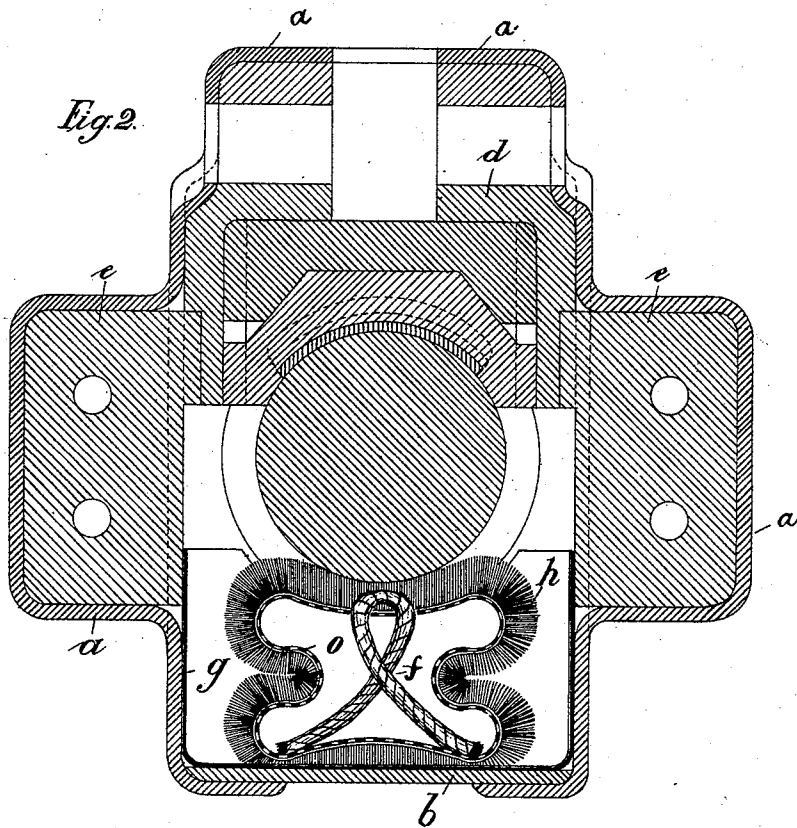
(No Model.)

3 Sheets—Sheet 2.

H. SICHELSCHMIDT.
AXLE BOX WITH REMOVABLE OIL WELL.

No. 538,553.

Patented Apr. 30, 1895.



Witnesses:
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Inventor:
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(No Model.)

3 Sheets—Sheet 3.

H. SICHELSCHMIDT.
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Fig. 3.

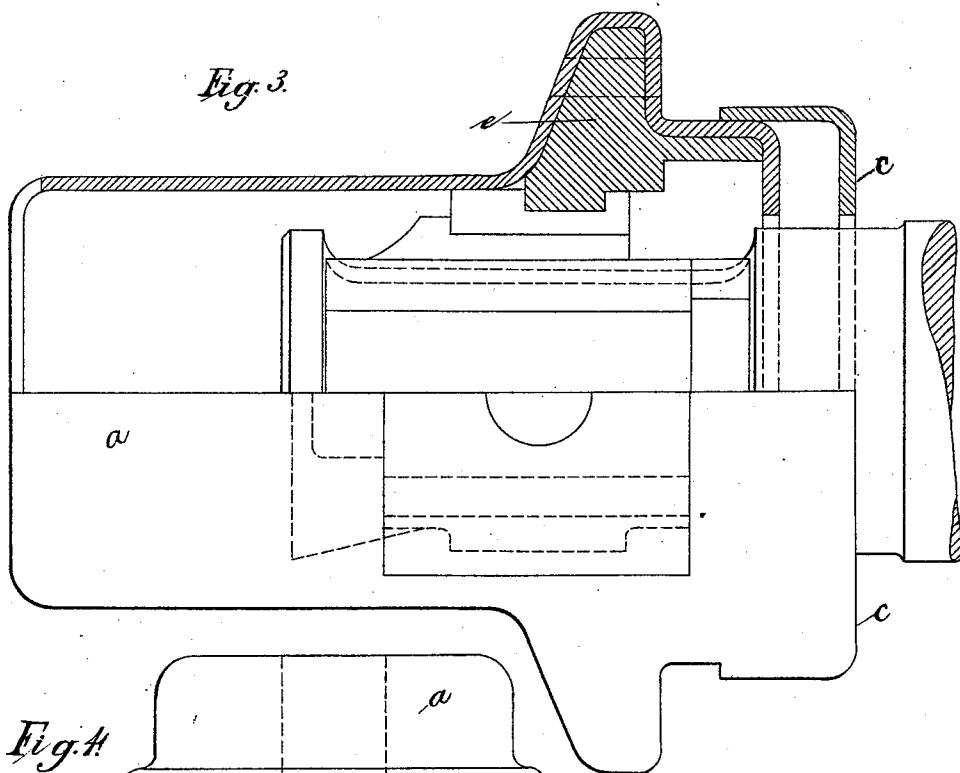
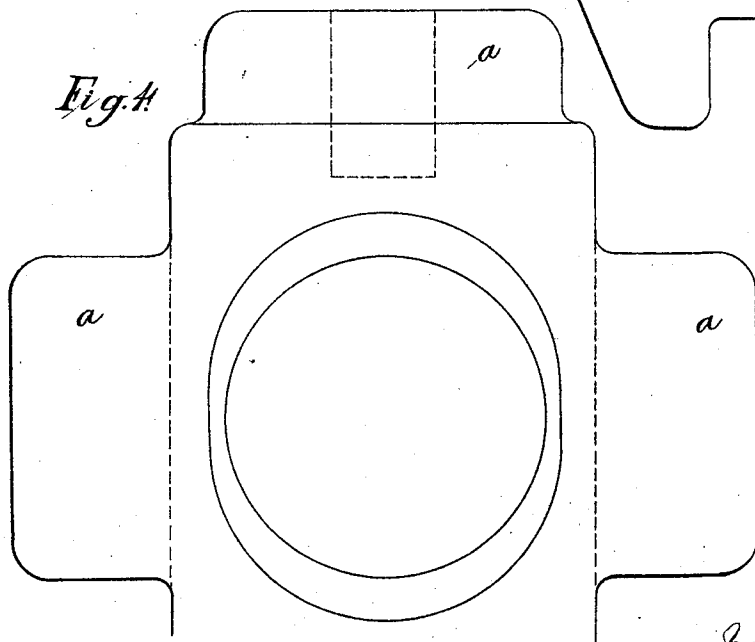


Fig. 4.



Witnesses;
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Lemuel Sumby.

Inventor;
Hermann Sichelschmidt
By James L. Norris.
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UNITED STATES PATENT OFFICE.

HERMANN SICHELSCHMIDT, OF DORTMUND, GERMANY.

AXLE-BOX WITH REMOVABLE OIL-WELL.

SPECIFICATION forming part of Letters Patent No. 538,553, dated April 30, 1895.

Application filed January 26, 1893. Serial No. 459,877. (No model.)

To all whom it may concern:

Be it known that I, HERMANN SICHELSCHMIDT, manufacturer, of Dortmund, in the Kingdom of Prussia, Germany, have invented a new and useful Axle-Box with Removable Oil-Well and Elastic Oil-Cushion, of which the following is a specification, reference being had therein to the accompanying drawings.

In comparison with the axle-boxes for railway carriages and vehicles made up to the present time of cast iron (and which are now in use on railways) the axle box which forms the subject of the present invention offers the advantage of greater strength or firmness and safety, inasmuch as the same consists of separate parts of pressed sheet steel which grip into each other and are secured together in such a way by means of welding processes so as to form a closed box.

In the accompanying drawings the subject of the present invention is represented as follows:

Figure 1 shows a longitudinal section; Fig. 2, a cross-section; Fig. 3, a top view of the axle-box, with one half in section, in the direction of the line *xx* of Fig. 1; and Fig. 4, a front view of the axle-box.

The axle box proper consists of the three parts *a*, *b*, *c*, and of the inserted crown *d* which is supported by the strengthening pieces *ee*. The parts *a*, *b*, *c*, are pressed as regards their shape and strength out of sheet steel in such a way as to form a standard axle box when the over-lapping joints are welded together. It is therefore possible with the axle boxes made in this way, to remove certain parts which are more particularly subject to wear, and to replace the same by welding on new parts so that therefore this new welded axle box need never be wholly replaced. Furthermore, the safety during working is much greater with these axle boxes than that in the case of the cast-iron boxes in use up to the present.

A new lubricating arrangement has been provided in the inside of the box below the journal which is intended to prevent the bearings from running hot and which owing to its excellent methods of lubricating insures

a considerable saving of oil and efficient lubrication of all wearing parts.

This lubricating attachment consists of an oil vessel *g* which is inserted in the lower part of the axle-box, and in which oil vessel is a perforated sheet-metal shell or frame *o* of substantially "hour-glass" shape in cross-section. The object of making the shell of this particular shape is for the purpose of giving greater elasticity to the same, whereby the shell will be free to yield back and forth under the weight of the axle.

Secured to and entirely surrounding the outside of the shell *o* is a woven-woolen cushion *h*, and within the shell or frame is a wick or tape *f*, one portion of which extends through the top of the shell into the woolen cushion, and serves to conduct the oil to said cushion from whence it is taken up by the axle. It will be noted that owing to the yielding qualities of the perforated shell or frame the woolen cushion will be held against the under side of the axle at all times and completely lubricate the same.

This lubricating arrangement prevents the oil in the woolen cushion from becoming thick and insures the same being kept in constant motion in consequence of the continual jerking of the axle caused by unevenness of the rails. Furthermore a perfect circulation of the oil will take place in the woolen cushion which may be described as follows: The superfluous oil contained in the upper half of the woolen cushion *h* is pressed into the inside of the shell through the perforated walls by the before-mentioned jerking of the axle. The oil drops down, and by means of the wick drawn through the top of the cushion, is again conducted to the latter. Therefore a rational, cheap and easily accessible lubricating arrangement of the journal is thus obtained which always feeds oil of pure quality and in sufficient quantities without in any way wasting the lubricant.

What I claim, and desire to secure by Letters Patent of the United States, is—

1. An axle-box for cars consisting of an outer sheet metal section or casing *a*, a base or bottom portion *b* fitted to and overlapped by the ends of the section *a*, said overlapped por-

tions being secured together, and a strengthening piece *c* surrounding and secured to the rear end of said section, substantially as described.

5 2. An axle box for cars consisting of an outer sheet metal section *a*, a base or bottom portion *b*, fitted to and overlapped by the ends of the section *a*, said overlapped portions being secured together, a crown-piece *d*, inserted
10 in the upper part of said section, strengthening pieces *e*, *e*, supporting the crown-piece, and a flanged ring *c*, inclosing and secured to the rear portion of the sheet metal sections, substantially as described.

15 3. In a car axle-box, the combination with an oil-vessel *g*, of a perforated sheet-metal shell located within said vessel, a woven woolen cushion secured to and entirely sur-

rounding said shell, and a wick located within the shell and communicating with said cushion, substantially as described.

4. In a car-axle box, the combination with an oil vessel *g*, of a perforated sheet-metal shell of substantially "hour glass" shape in cross-section, located within said vessel, a
25 woven woolen cushion secured to and entirely surrounding said shell, and a wick located within and having a portion thereof extending through the top of said shell and communicating with the cushion, substantially as
30 described.

Dusseldorf, November 11, 1892.

HERMANN SICHELSCMIDT.

Witnesses:

PAUL FISCHER,
PAUL BRINKMANN.